

1. A high speed scanning or steering device for pointing a mirror, optic or light source comprising:

means for basing electromotive actuators, parallel motion flexures, and rod flexure attachment boss;

means for restraining five of six possible axes of motion of a translating frame element, rigidly connected to said means for basing electromotive actuators, parallel motion flexures, and rod flexure attachment boss;

means for attaching moving ends of parallel motion flexures and moving end of electromotive actuators;

means for tilting of central spacing element while restricting sidewise translation motion of said element, securely connected to said means for attaching moving ends of parallel motion flexures and moving end of electromotive actuators;

means for mounting stem attachment and convergent end of two bipod flexures, threadably clamped and preferably bonded to said means for tilting of central spacing element while restricting sidewise translation motion of said element;

means for preventing translation of central element along z axis; and

means for anchoring rod flexure to base structure, threadably coupled to said means for preventing translation of

central element along z axis, lockably connected to said means for mounting stem attachment and convergent end of two bipod flexures, and rigidly connected to said means for basing electromotive actuators, parallel motion flexures, and rod flexure attachment boss.

2. The high speed scanning or steering device in accordance with claim 1, wherein said means for restraining five of six possible axes of motion of a translating frame element comprises a set of parallel motion flexures.

3. The high speed scanning or steering device in accordance with claim 1, wherein said means for attaching moving ends of parallel motion flexures and moving end of electromotive actuators comprises a pocketed translating frame element, having shear stiffener.

4. The high speed scanning or steering device in accordance with claim 1, wherein said means for tilting of central spacing element while restricting sidewise translation motion of said element comprises a bipod flexure element.

5. The high speed scanning or steering device in accordance with claim 1, wherein said means for mounting stem attachment and convergent end of two bipod flexures comprises a central spacing element.

6. The high speed scanning or steering device in accordance with claim 1, wherein said means for preventing translation of central element along z axis comprises a rod flexure.

7. A high speed scanning or steering device for pointing a mirror, optic or light source comprising:

    a base structure, for basing electromotive actuators, parallel motion flexures, and rod flexure attachment boss;

    a set of parallel motion flexures, for restraining five of six possible axes of motion of a translating frame element, rigidly connected to said base structure;

    a pocketed translating frame element, having shear stiffener, for attaching moving ends of parallel motion flexures and moving end of electromotive actuators;

    a bipod flexure element, for tilting of central spacing element while restricting sidewise translation motion of said

element, securely connected to said pocketed translating frame element;

a central spacing element, for mounting stem attachment and convergent end of two bipod flexures, threadably clamped and preferably bonded to said bipod flexure element;

a rod flexure, for preventing translation of central element along z axis; and

a rod flexure attachment boss, for anchoring rod flexure to base structure, threadably coupled to said rod flexure, lockably connected to said central spacing element, and rigidly connected to said base structure.

8. The high speed scanning or steering device as recited in claim 7, further comprising:

a mounting stem, for attachment of mirror or light source, rigidly affixed to said central spacing element.

9. The high speed scanning or steering device as recited in claim 7, further comprising:

a sealing cover, for protection from environment, safely connected to said base structure.

10. The high speed scanning or steering device as recited in claim 7, further comprising:

an elastic diaphragm, for sealing a mounting stem, sealably connected to said sealing cover.

11. A high speed scanning or steering device for pointing a mirror, optic or light source comprising:

a base structure, for basing electromotive actuators, parallel motion flexures, and rod flexure attachment boss;

a set of parallel motion flexures, for restraining five of six possible axes of motion of a translating frame element, rigidly connected to said base structure;

a pocketed translating frame element, having shear stiffener, for attaching moving ends of parallel motion flexures and moving end of electromotive actuators;

a bipod flexure element, for tilting of central spacing element while restricting sidewise translation motion of said element, securely connected to said pocketed translating frame element;

a central spacing element, for mounting stem attachment and convergent end of two bipod flexures, threadably clamped and preferably bonded to said bipod flexure element;

a mounting stem, for attachment of mirror or light source,

rigidly affixed to said central spacing element;

a rod flexure, for preventing translation of central element along z axis;

a rod flexure attachment boss, for anchoring rod flexure to base structure, threadably coupled to said rod flexure, lockably connected to said central spacing element, and rigidly connected to said base structure;

a sealing cover, for protection from environment, safely connected to said base structure;

an elastic diaphragm, for sealing a mounting stem, sealably connected to said sealing cover;

an adaptive spacer, for insulating actuators from preloading screw torque; and

a shear stiffener, for stiffening pocketed translating frame element.